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## Using elevators in **HIGH-RISE EGRESS**

page 10

### **INSIDE:**

Flexible, sustainable  
data centers | page 18

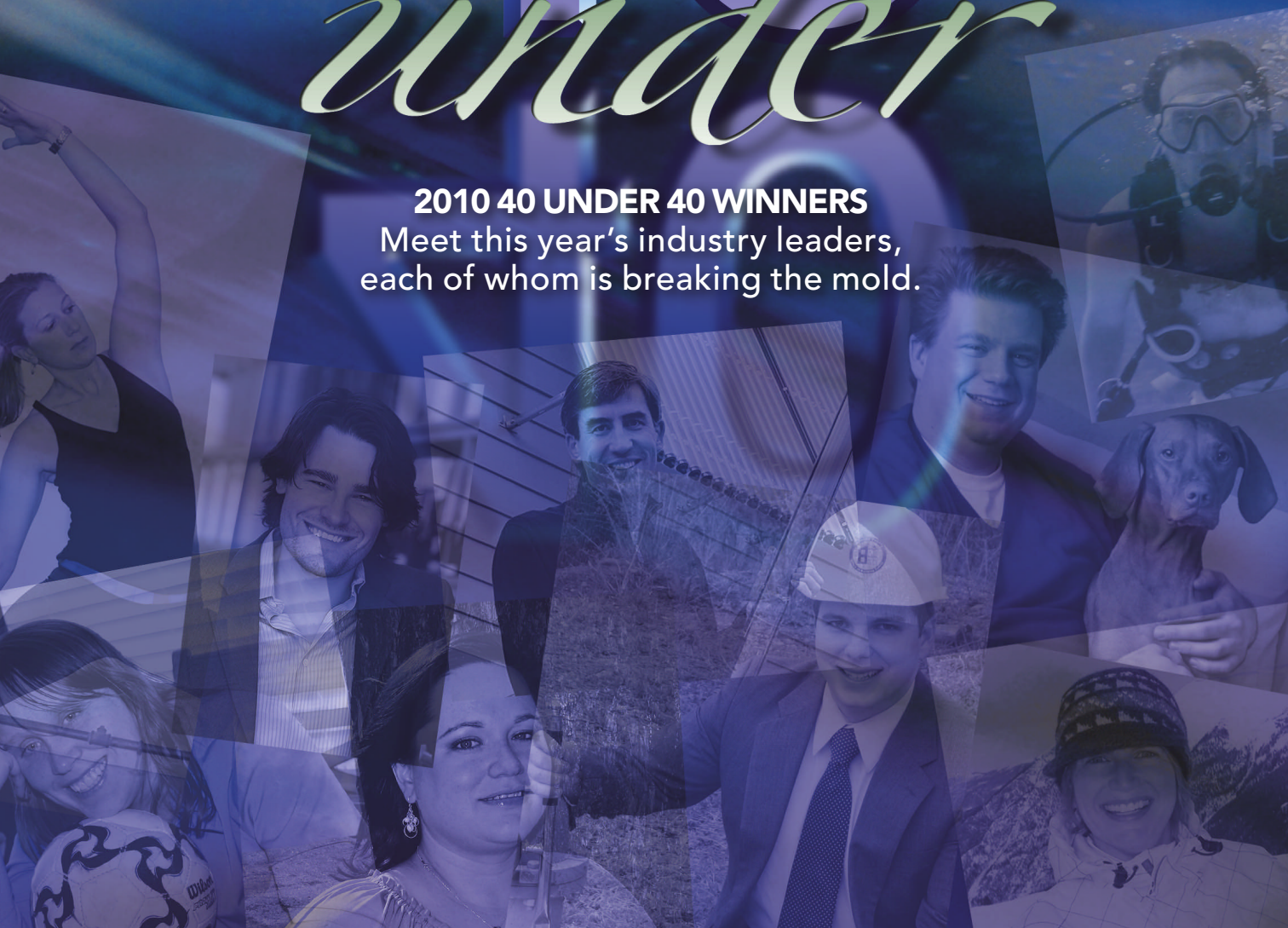
40 Under 40  
winners | page 53

Product of the Year  
finalists | page 65

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**40**  
*under*

**2010 40 UNDER 40 WINNERS**  
Meet this year's industry leaders,  
each of whom is breaking the mold.



# Honor Roll

Stephanie Adams-Ball	47
Justin Biller	47
Glenn Brady	47
Lew Brode	47
Meg Buczynski	48
Tim Chadwick	48
Roger Chang	48
Edward Clements	48
Oscar Cobb Jr.	49
Raj Daswani	49
Michael Durand	49
Ben Erpelding	49
Jess Farber	50
Wayne Gaw	50
Shaun Grimm	50
Danette Hauck	50
Walt Herring	51
Mike Hess	51
Jan Inguagiato	51
David Jacoby	51
Elise Kirchhofer	52
Ralph Koeber	52
Sarah Kuchera	52
Ken Kutsmeda	52
Vidar Landa	53
Brandon Lemonier	53
Dunstan Laurence	
Macauley III	53
Robert McKay	53
Jessica Navarro	54
Michael Nowicki	54
Julie Paquette	54
Jason Perry	54
John Paul Peterson	55
Justin Schmeer	55
Andy H. Smith	55
Brian Stacy	55
Christine Theisen	56
Andy Thompson	56
Mike Tillou	56
Jun Yang	56

# 40 Under

**PASSION, DEDICATION, URGENCY**  
 These three words barely scratch the surface  
 when trying to describe the  
 2010 40 Under 40 award winners.

BY DAWN REISS, *Contributing Writer*, and AMARA ROZGUS, *Senior Editor*

A home brewer. Motorcycle enthusiasts. Deep-sea and fly fishers. A cello player. A new father. A budding DJ. Adrenaline junkies. World travelers. A spider hater. What do all of these people have in common? They're among this year's 40 Under 40 award winners, a group of young professionals that our engineering community will be proud to work with.

The 40 Under 40 awards are bestowed on the best and the brightest—40 years old or younger—who are engaged in the building and construction industry. These individuals are fire protection, mechanical, lighting, environmental, electrical, and civil engineers, among other things. They spend their days streamlining engineering offices, designing fire protection systems, saving clients money, creating award-winning systems, designing innovative engineering solutions, and building bridges (literal and figurative).

Now in its third year, the 40 Under 40 program honors young building industry professionals, each of whom was nominated by a mentor.

So read on. You'll meet: A professional skateboarder. Youth mentors. A yoga enthusiast. Dog and cat lovers. A skier. A board game aficionado. Mountain climbers. A home restorer. New moms. Fund-raisers. Pub crawlers.



AMARA ROZGUS



DAWN REISS

## Stephanie Adams-Ball, 39

Senior Project Consultant,  
D. L. Adams Assocs. Inc., Denver  
Metropolitan State College,  
BS Electrical Engineering



It doesn't matter what industry, Adams-Ball always knows how to creatively cook something up. Originally, she enjoyed working as a chef, carving logos into melons and making dragon boats out of radishes. "But it was long hard work for very little pay," she said. Eventually Adams-Ball began working for her father's consulting and design company, which specializes in acoustics and performing arts systems designs for theaters. She started working as a CAD operator and because her father is the owner, she wanted to make sure she wasn't receiving any favoritism. "I expect more out of myself and he expects more out of me," she said. Adams-Ball was project manager on the Colorado College Cornerstone Art Center's \$33 million building, including a 450-seat theater. She implemented an electro-acoustic system that picks up direct sound in the room, applies it to an algorithm, and subtly puts sounds back into the discrete speakers so the sounds of a violin will linger in the air, like the surround-sound of a vast auditorium. The LEED Gold certified building's central lobby has 4-in.-thick cotton panels made of recycled jeans. Adams-Ball knows so much now that she ended up playing DJ on her wedding day when the hotel staff didn't know how to operate the audio equipment. To relax, she plays on two soccer teams, drives her navy Italian Piaggio MP3 scooter, and hikes "14ers," 14,000-ft peaks in the Rocky Mountains with her husband Jim.

## Glenn Brady, PE, 39

Project Manager, Sun-Air Sheet Metal,  
Fairbanks, Alaska  
University of Alaska-Fairbanks,  
BS Mechanical Engineering



Beer and bullets are Brady's specialty. Except the weapons Brady deals with are on a much larger scale. When he's not brewing beer for his restaurant, Silver Gulch Brewing & Bottling, America's most northern brewery, he's working on anti-ballistic missile defense systems. (Think Ronald Reagan's Star Wars Strategic Defense Initiative.) As the HVAC Construction Project Manager, he designed extensions in the seismic bracing and duct system for the mission critical Ground-Based Midcourse Defense (GDM) Segment projects including: the IFICS Data Terminal (IDT) 1 and 2, Missile Field No. 2 mechanical-electrical building, and power plant at Alaska's Fort Greely. "These are not your typical shopping mall or school," he said. His knowledge landed him a gig teaching in Saudi Arabia, where he instructed engineers in process plant instrumentation at a petrochemical plant. He's also been the HVAC project manager for dozens of other projects, ranging from hotels, schools, hospitals, laboratories, and gold mines, and worked his way up his parents' company as a sheet metal worker. These days, he jokes that he helps the family business with his beer. "If you need a little help, it's always good to slip someone a case of beer," said Brady. "It's a great equalizer." It's a skill Brady learned as a bootlegging homebrewer during a college semester abroad in Sweden. Brady, who serves as a chairman of the Alaska CHARR Education Fund board, which raises money for academic scholarships, met his wife Tobie "the good old-fashioned way"—in a bar. They have two children, Farah, 3, and Jillian, 1.

## Justin Biller, EIT, MCP, 29

Assistant Building Commissioner, Office  
of Building Safety, Roanoke (Va.) County  
Old Dominion University,  
BS Engineering Technology



You can almost hear Johnny Cash blaring in the background of Biller's life. For Roanoke County, Biller helps manage building permits, which include professional, residential, institutional, and industrial buildings. As a certified fire protection specialist, one of Biller's jobs was to review codes and keep inmates contained but safe if a fire broke out at the 300-bed, 257,000-sq-ft Western Virginia Regional Jail. As the approving authority, he also had to research and anticipate how unique green design features could be properly implemented, like using gray water to wash clothing and a high-pressured vacuum plumbing system in the toilets. "These currently aren't addressed in the codes," Biller said. "So it's checking everything against basic engineering principles." As a fire protection inspector for the state's fire marshal's office, he worked on Wallens Ridge State Prison. "It's a very complex design since most places are designed to get people out," he said. If a fire breaks out in a prison, the inmates must be kept locked up, but there has to be a secure system to evacuate them to another area of the prison, creating a delicate balance between security and safety. As a Jehovah's Witness, Biller has helped build 15 churches and averages 20 hours a week in his ministry work. He loves running and reading about architecture. Biller jokes it was love at first sight when he met his wife Heather when they were 22. They were married within nine months and now enjoy hiking together with their schnauzer Bentley.

## Lew Brode, PE, LEED AP, 38

Senior Vice President/Branch Manager,  
Greenman-Pedersen Inc., Rockville, Md.  
University of Maryland, BS Mechanical  
Engineering; Johns Hopkins University,  
MS Business



When he's not playing three-on-three pickup basketball, Brode is running the business and operations side of GPI's Rockville office. He took over as branch manager in 2004, and the office was "losing money every day the doors were open," he said. Led by Brode, the staff pulled together to expand the client base, improve internal procedures, and reduce overhead costs. The result was new business partners, a revitalized team environment, and a move to a more efficient office space. Under Brode's leadership, the branch has increased its net revenue by 120% from \$1.6 million in 2004 to \$3.5 million in 2009. He is currently working on University of Maryland's University Village dormitory complex that includes two nine-story dormitories and a seven-level parking garage. Brode teaches several AIA-accredited engineering classes to architects to "help them understand what we do on our side of the table." His office has competed the past three years in the "Plane Pull" at Dulles Airport to raise funds for Special Olympics. He jokes the "wimpy engineers" haven't won against "big guys" like police officers yet. Brode shares a "split" sports-themed basement, which has a Maryland-themed bar for him and Penn State memorabilia for his wife of 10 years, Diane. They have three children: Tyler, 6, Carter, 3, and 6-month-old Natalie.

**Meg Buczynski, PE, LEED AP, 29**

Civil Engineer/Project Manager,  
Stantec, Boston  
Brown University,  
BS Civil/Environmental Engineering



To say Buczynski likes field hockey is an understatement. The long-time defender and team captain earned First-Team All Ivy while playing at Brown, and has gone on to design synthetic fields like one at Boston College's Newton Campus Field Hockey Complex. It was a quick turnaround after BC's Alumni Stadium changed over to FieldTurf for the football team, which isn't conducive to the faster speeds needed for Division I field hockey, usually played on Astro Turf. Mount Holyoke College's athletic director said she specifically went with Stantec over two other bids because of Buczynski's experience. The college's \$9 million lighted outdoor stadium includes a 10-lane track and earned the American Sports Builders Assn. Distinguished Outdoor Track Facility of the Year award in 2008. As the project manager, Buczynski modified the typical infilled turf surface to make it more "realistic for field hockey" by filling in the system higher than a typical field for a quicker, smoother surface because the game needs to be played at a fast pace. As one of a handful in Stantec's sport design group, Buczynski has also designed and managed dozens of baseball, softball, rugby, and track and field facilities. The new mother is a self-proclaimed Harry Potter book addict and spent six weeks as child going cross-country camping with her parents, from New York and Canada to Washington State and California. She enjoys skiing and hiking New Hampshire's White Mountains with her husband Dave, and spending time with their 11-month-old son Matthew.

**Roger Chang, PE, LEED AP, 32**

Principal, Director of Sustainability, West-  
lake Reed Leskosky, Washington, D.C.  
M.I.T., BS Mechanical Engineering,  
MS Mechanical Engineering



Chang can make a cello sing as well as he can master-plan energy modeling of a complex building. Born in Taiwan, Chang moved to the United States when he was 3 months old and has played the cello since he was 12. With the American Youth Philharmonic, New York Repertory Orchestra, and as a principal cellist in the MIT Symphony, he traveled the world to perform. His knowledge has helped when designing cultural and performing arts centers. He's also worked as the sustainability consultant for government projects like the Harry S. Truman Dept. of State Building in Washington, D.C., and as the lead mechanical engineer for the \$41 million, 60,000-sq-ft research center for alternative fuel sources and building technologies, the Syracuse Center for Excellence, slated for LEED Platinum certification. Chang used a ground source heating and cooling system with underfloor air distribution to provide efficient and personal conditioning to occupants. The project's innovations not only increase worker comfort, but landed the building in the Smithsonian's New York-based Cooper-Hewitt National Design Museum. Chang earned ASHRAE's New Face of Engineering Award in 2006. His latest venture is developing the sustainability master plan for The Graham School in Hastings-on-Hudson, N.Y., run by the oldest orphanage provider in the United States. The entire campus serves as a "last chance" rehabilitation haven for children, and is slated for LEED Gold certification. Outside of work, Chang enjoys riding roller coasters, especially the ones at Ohio's Cedar Point, with his wife Tanis, and being around his pug Mercury and calico cat Igby.

**Tim Chadwick,  
PE, LEED AP, 40**

President, Design, Alfa Tech,  
San Jose, Calif.  
California Polytechnic State University,  
BS Mechanical Engineering



Any Facebook fan should thank Chadwick. He's in the process of finishing the social media's first data center that it will solely own. The \$30 million mission critical facility, which is targeting LEED Platinum, will not have any mechanical cooling. Instead, it will all be done with evaporative cooling, thanks to Prineville, Calif.'s dry and arid climate and 3,500-ft elevation. As the principal in charge and design project manager, Chadwick's plan is to keep the power usage effectiveness (PUE) so low that it will operate at only a 1.1 PUE. It will draw very little power above and beyond what is needed for the computing power, making it the first of its kind if it succeeds. It is being tailored to Facebook's new patent-pending UPS system that reduces electricity use by as much as 12%. It's all being designed with 3-D BIM software. "It's one-of-a-kind," Chadwick said. "We are trying to set a benchmark and that requires innovation." When Chadwick's not working, he enjoys golfing with his 12-handicap and traveling with his wife Tania, whom he met while they were swimming together on the Division II program in college. The couple have gone to four different Olympics, including the 2010 Winter Games in Vancouver. They have two children, Carter, 6, and MacKenzie, 2, and two border collies, Kidd and Boss.

**Edward Clements,  
PE, LEED AP, 35**

Senior Associate, HGA Architects and  
Engineers, Minneapolis  
University of Texas, BS Architectural  
Engineering; Penn State University,  
MS Architectural Engineering



For a while, it looked like "Ed" Clements' future was playing 1980s-style metal music inspired by the likes of Metallica, Led Zeppelin, Black Sabbath, and Mötley Crüe. Although Clements still loves the drums, he no longer plays in a band, and his "wild days" are now spent with his wife Amanda training two Vizslas (Hungarian pointer dogs), Csilla and Blitzten. The father of a 14-month-old son, Clements is the chair of the Trustees Ministry with Robbinsdale United Church of Christ, and focuses much of his work as a mechanical engineer on designing HVAC systems for performing and fine arts centers, museums, healthcare facilities, and churches. For the \$45 million, 350,000-sq-ft Grace Church in Eden Prairie, Minn., Clements designed the HVAC systems for the 4,500-seat auditorium, which had to be designed, on a tight budget, to meet quiet (NC-15) acoustic noise level for professional video and audio recordings of services and concerts. Clements also served as the lead mechanical engineer on the \$100 million, 170,000-sq-ft 1,700-seat Valley Performing Arts Center at Cal State at Northridge, Calif., which will open in 2011. The center's auditorium includes a displacement ventilation system that introduces 65 F air through the floor, improving the IAQ and operating efficiency. Clements has volunteered with Habitat for Humanity and has participated in the Minnesota AIDS Walk for the past six years, raising nearly \$15,000 toward AIDS research and outreach services.

## Oscar Cobb Jr., PE, LEED AP, 34

Mechanical Engineer, Kahn, Detroit  
Lawrence Technological University,  
BS Mechanical Engineering



Cobb jokes he's "an old man in a young man's body." A closeted country music fan, Cobb also enjoys old Christian hymns and the "simple things in life," like a taking a walk or listening to the wind rustle the leaves. He also has a soft spot for kids, working as a youth minister at Bethlehem Tabernacle Church of God in Christ, where his group is known as "Oscar's kids." "When my wife first met me, she thought I had at least six kids because I was always talking about taking the kids to lunch or going roller skating with them," said Cobb, who now has a 16-month-old son Samuel. In the office, Cobb's known as a problem solver who comes up with creative solutions for HVAC systems in the healthcare, education, industrial, commercial, and mission critical industries. For Detroit's College of Creative Studies, Cobb helped convert an old GM building with 12-ft ceilings and 2-ft concrete beams into a modern usable space for a middle and high school. To do so, Cobb used small utility pockets in each room to pipe the air up and down 11 floors from the basement. As the lead engineer, Cobb designed mechanical systems including HVAC, plumbing, and fire protection for more than 3,000 sq ft in biofuels and technology lab space at NextEnergy Center. At a 20,000-sq-ft Avon chiller plant in Springdale, Ohio, Cobb created a gray water reuse program, and created a hybrid of manual and automatic controls to reduce the "spaghetti junction" of pipework that ran among three 1960s absorption chillers by replacing the 3,000 tons of cooling with centrifugal chillers for the \$4 million project.

## Michael Durand, PE, LEED AP, 38

Principal, Kahn, Detroit  
Lawrence Technological University,  
BS Civil Engineering



Maybe it was the skills he learned as a defensive tackle at Division II Saginaw Valley State University, but Durand understands how to build a team. When GM and Isuzu decided on a joint venture to build and share a 600,000-sq-ft DMAX diesel engine plant, Durand had to blend two strikingly different cultures. The Japanese prefer a very toned-down administrative building. "Their approach is an open office space, where everyone has the same type of cubical, even the CEO," Durand said. "There's no private offices to show that everyone is an equal, that you're together as a team." To blend with GM's more traditional American hierarchy, Durand helped orchestrate a compromise: an open floor plan that didn't include offices but included small conference rooms that could be converted into to small offices if needed. It took some negotiating, but both parties agreed because the flexible floor plan was more cost-effective and efficient. Durand's other specialty lies in healthcare, working for one of five accredited design firms in the country that uses the nonprofit The Planetree Visionary Design Network's method, a design philosophy that incorporates patient-centered healthcare into the design of a healing environment. When Durand isn't healing the world or bringing it together, he's running around like a tiger with his three kids, Bryce, 7, Jacob, 6, and Hunter, 2, who chase him until he tickles them into giggling uncontrollably. He also enjoys mountain biking, golfing, and remodeling his home with wife Kristin.

## Raj Daswani, 39

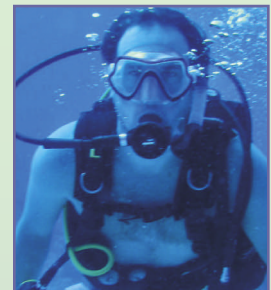
Associate Principal, Arup, San Francisco  
University of Texas-Arlington,  
BS Mechanical Engineering,  
MS Management of Technology



After serving more than two years of mandatory service in Singapore's army as a combat engineer, Daswani came to the United States for a college education and never left. "I drove heavy machinery, dump trucks, and cranes, and used a lot of explosives," he said. "I was either building ditches or blowing them up." Now in California, Daswani, who is the co-leader of the mechanical group in the Arup San Francisco office, has served as Arup's project manager for the fast-tracked 878,000-gross-sq-ft University of California San Francisco Mission Bay Medical Campus, which is slated to be LEED Gold certified and includes a 645,000-sq-ft, 289-bed acute care hospital, 193,000-sq-ft outpatient building, and a 39,000-sq-ft energy center. Daswani helped integrate the design-assist delivery process with project subcontractors in an integrated design and construction process that should minimize construction costs if the project goes over budget. Daswani also incorporated variable airflow technology, a new concept for the strictly regulated California hospitals that are concerned with appropriate air pressurization zones of operating rooms. Daswani also helped the same university save 10% of its energy costs at the 176,000-gross-sq-ft five-story Rock Hall laboratory by fine-tuning the equipment control sequences and by recalibrating hydronic distribution loop sensors. Besides reading about economics for fun, Daswani loves biking, playing soccer, skiing, and playing tennis with his wife Julie and their daughter Maddie, 2.

## Ben Erpelding, PE, CEM, 35

Director of Engineering,  
Optimum Energy, San Diego  
San Diego State University,  
BS Mechanical Engineering,  
MS Mechanical Engineering



Just call it skating to success. After graduating from high school as a valedictorian, Erpelding worked as a professional skateboarder, living in Denmark and traveling around Europe and the United States. "Back then it wasn't as big as it is now," he said. "All my friends are now millionaires. But in 1992 it wasn't the cool thing to do." Erpelding's father reminded him that making \$1,000 a month wasn't going to help get a girlfriend, so he went to college. Now, Erpelding has other arenas to show off. As Director of Engineering for Optimum Energy, he designed the University of Texas at Austin's Chilling Station 6 district cooling optimization project, a \$40 million endeavor that is the first in the world to include three variable-speed electric chillers. The HVAC software controls the sequences of the 15,000-ton plant, looking at all the temperatures, pressures, and flows to crunch the information to create a high-performance system with low energy usage, Erpelding said. He also led the energy reduction project of a 750,000-sq-ft critical data center located in New York that will annually save \$185,000 with a two-year simple payback on the \$350,000 project. Erpelding served as a U.S. Dept. of Energy student mentor and helped Optimum Energy earn a GoingGreen Top 100 Winner award. In his free time, Erpelding enjoys deep-sea fishing and scuba diving with his wife Brigette in Thailand, Dubai, Mexico, and Hawaii. To get their newborn daughter June Camille to sleep, Erpelding plays Spanish melodies on his classical guitar.

**Jess Farber, PE, LEED AP, 38**

Partner, CMTA, Louisville, Ky.  
Georgia Institute of Technology,  
BS Mechanical Engineering



Ask anyone who knows Farber and they'll tell you how much he loves "The Boss." He's been to at least eight Bruce Springsteen concerts this year—when he's not busy quoting "stupid phrases" from the Caddyshack, Christmas Vacation, and Anchorman: The Legend of Ron Burgundy movies much to the chagrin of his wife Sandra. The father of four leads CMTA's mechanical engineering department and is part of the engineering team designing what he said is the first net-zero energy public school in the nation, Richardsville Elementary in Bowling Green, Ky. The building uses daylighting and has 40,000 sq ft of solar panels on its roof. To test theories, Farber turned an office move into an in-house LEED Gold rated experiment that could then be taken back to clients. "We turned our building into a learning lab," Farber said. He added a 12 kW solar system to the roof of the new 20,000-sq-ft company building and integrated it into a net metered system so electricity was generated from it to offset what comes off the utility company grid, saving 25% of kW power. "There's not a lot of specific data for how those things work in our region," he said. "So this gives us an edge to help our customers with real-time data." An avid runner, Farber enjoys running half marathons and serves as the head cross-country coach for the third- to eighth-grade team of more than 50 kids at St. Albert the Great School in Louisville.

**Shaun Grimm, PE, 31**

Partner, ccrd partners, Phoenix  
Kansas State,  
BS Architectural Engineering



Three years ago, Grimm moved from Dallas to Arizona to open a ccrd office with eight people to more easily handle clients on the West Coast. As the lead electrical engineer, Grimm is overseeing the addition of a 760,444-sq-ft expansion for Phoenix Children's Hospital that includes a 30,000-sq-ft facilities plant. The \$588 million construction project includes medium voltage distribution with the hospital, which will back-feed to the existing smaller hospital. At the LEED Platinum \$100 million, 169-bed Dell Children's Medical Center of Central Texas in Austin, Grimm helped proctor a joint venture between the 472,000-gross-sq-ft hospital and Austin Energy to share a packaged hybrid \$18 million Building Cooling Heating and Power District Energy Plant. The innovative idea allows on-site production of the power for the day light-harvesting medical complex, but uses the utility company as the emergency backup. For his efforts, Grimm earned ccrd's 2010 Engineer of the Year Award. Grimm has also participated in a food bank drive where teams build structures out of cans to collect food for the local food bank. The father of two met his wife Sara after she broke up with his college roommate. He enjoys reading mystery novels and woodworking.

**Wayne Gaw, PE, LEED AP, 38**

Vice President, WSP Flack + Kurtz,  
San Francisco  
Trinity University (Dublin, Ireland),  
BS in Building Services



This Irish lad knows all about working hard and playing hard. From skiing and snowboarding in Tahoe to golfing in horizontal rainstorms, he likes to keep busy. He originally planned to move from Dublin to London to work as an engineer, but with his green card about ready to expire, Gaw decided to take a chance and move to San Francisco at the age of 22. While working as a waiter in a Fisherman's Wharf restaurant, he landed an engineering job with WSP Flack + Kurtz and has been with them ever since. Gaw drives a custom 1991 Harley Davidson, a passion that started from his first motorbike trials at the age of 7 in Ireland. Gaw's large-scale endeavors in the office include creating Apple flagship stores in the United States, Japan, and London, and serving as the lead engineer for the mechanical and design of the Suvarnabhumi Bangkok International Airport. For the latter, he optimized the concourse's elliptical shape by changing the quantity of glazing on the exterior diamond-shaped pattern to be reduced to 25% of total surface area at the top down to all-glass base with a solar controlled roof. As the project manager and lead HVAC engineer, Gaw led a team of 40 people on Las Vegas' recently completed 76-acre, \$8.5 billion MGM MIRAGE CityCenter. He also enjoys volunteering with the Leap Sandcastle Classic that builds elaborate sandcastles to raise funds for area schools and going to the occasional San Francisco Irish pub where Gaw met his wife Deanna. They have a 2-year-old daughter, Adelaide.

**Danette Hauck, PE, LEED AP, 36**

Senior Mechanical Engineer/  
Project Manager, URS, Cleveland  
University of Minnesota, BS Mechanical  
Engineering; Washington University in  
St. Louis, MS Engineering Management



Hauck jokes she was the "classic geeky H overachiever" who attempted to be an athlete. Growing up in Grand Forks, N.D., Hauck became a hockey fan because it was the major sport during the winter months. She learned to play the bassoon because she was so bad at the clarinet. She now loves playing cards and board games with her husband Steven, and daughters Sara, 3, and Abigail, 1. At URS, she is involved with numerous healthcare, higher education, government, and commercial projects. As the lead mechanical engineer and energy modeler for the new \$96 million, 225,000-gross-sq-ft U.S. Courthouse in Toledo, Ohio, which is slated to be LEED Silver certified, she has guided the designers on the wall construction and window coverage. For the \$9 million, 50,000-sq-ft Fairfax Global Cardiovascular Innovation Center in Cleveland, Hauck served as the LEED energy modeler to create a more efficient research facility lab, with personalized controls and lab hoods with occupancy sensors. As the proposal and program manager for Kent State University's Energy Master Plan, she coordinated more than 20 engineers and field technicians from four companies to survey more than 8 million sq ft of building space on the main and eight satellite campuses. Hauck is a founding member of the Cleveland URS office's Sustainability Committee and regularly volunteers at Cleveland State University, Saint Joseph Academy, and Shaker Heights High School engineer day programs.

## Walt Herring, RCDD/OSP, 37

Department Manager, Bala, Philadelphia  
University of New Mexico,  
BA University Studies



If you're looking for Herring and can't find him, he's probably on a boat deep-sea fishing for tuna in Central America. As a licensed captain with the Coast Guard, Herring ran his own crew off his 31-ft Rampage boat called "The Battlewagon" that he docked off the New Jersey shore. These days, he serves as a first mate of a couple of tournament fishing boats and enjoys backpack fishing—exploring the waters around Belize and surrounding countries in Central America. Growing up in Arizona, Herring jokes he fished 300 days in a single school year from a tin boat he brought to school hooked on the back of his pickup truck. In the office, he designs low-voltage systems in data centers and intelligent buildings from the Philadelphia Stock Exchange to Time Warner Cable. As the senior designer he oversaw the relocation of the famed Tasty Baking Co. Headquarters and a new 345,000-sq-ft building on 25 acres in Philadelphia's Naval shipyard. He also planned and designed the IP infrastructure and state-of-the-art data center. For the University of Pennsylvania's Health System, he documented 210 manhole covers with a geosyncroist, which uses satellite tracking to quickly identify the locations. For Temple University Health System, Herring designed a hybrid optical cable infrastructure system, in lieu of traditional copper to reduce costs and energy consumption. Herring's current personal project is refurbishing a 100-year-old apartment building, a former rectory of St. Charles Borromeo Catholic Church in Drexel Hill, Pa., that still has its original hardware.

## Jan Inguagiato, PE, LEED AP, 35

Director, Held Enloe & Assocs.,  
Washington, D.C.  
Clarkson University, BS Civil Engineering;  
University of Missouri-Rolla,  
MS Engineering Management



When it comes to disasters, Inguagiato knows how to help. As a captain in the U.S. Army Corps of Engineers, she earned the Meritorious Service Medal for building an emergency bridge in Greenland. The bridge had washed out and was critical for the yearly resupply of fuel for Thule Air Base, which many planes use as an international refueling stop. Not offloading the fuel on time would cost approximately \$100,000 a day, so Inguagiato flew from Fort Hood, Texas, to Greenland on a few hours' notice and had to rebuild the bridge within a week. She also went to Thailand and worked on a joint operation to assist rural villages by building open-air schools with found materials, without the help of a translator. "It was a lot of sign language and pointing to figure out how to get things bought," she said. Inguagiato's unusual career path moved her from active duty Army officer to construction and design management, providing consulting services to clients on multimillion-dollar disputes. She regularly works with contractors and insurance companies to assess disaster areas including fires, hurricanes, and floods to estimate the total damages and time needed to rebuild. Inguagiato, who was a collegiate swimmer, enjoys kayaking, camping, and hiking with her family, husband Larry and daughters Jessie, 7, and Kaitlyn, 5. She volunteers as co-chair on a Greening committee to help her daughter's school build LEED-certified buildings and enjoys making jewelry and sewing. "My husband teases me that he never would have guessed I'd know how to sew when he first met me," she said.

## Mike Hess, PE, LEED AP, 34

Principal, X-nth, Maitland, Fla.  
Milwaukee School of Engineering,  
BS Architectural Engineering



Hess is all about fun and games while seriously saving the planet. His wife Barbara used to leave the lights on at their home, so he trained their dog, Gusto, how to jump up until the lights turned off. He's also part of a semiannual home-brewing contest that Hess judges by drinking the beer. The winners receive a homemade T-shirt designed by Hess and others that says something like "Sizzle Chest" or "Mike is the smartest man alive." Hess has worked on more than 25 LEED certified projects including the Silver LEED certified 6,000-sq-ft Kennedy Space Center Visitor Complex Commissary. "It didn't fit into the LEED rating system very well," he said. But thanks to Hess and the team's research, they were able to design the building to generate 15% of its own energy through onsite solar power and to become more than 35% more energy-efficient than required by the energy code with waterless urinals and dual-flush toilets. Hess oversaw the sustainability process for the first LEED project at DePaul University, a Gold certified research laboratory. The \$40 million, 130,000-sq-ft Andrew J. McGowan Science building includes heat recovery coils, a variable air volume exhaust and energy recovery system, and high-efficiency lighting, which also cost more money. Hess, who helped found the U.S. Green Building Council Central Florida Chapter, also earned Chapter Leader of the Year in 2008 and serves on the USGBC National Board of Directors and the Green Parent Assn. Board. Hess and Barbara have two children: Michael, 4, and Allison, 23 months.

## David Jacoby, PE, LEED AP, 37

Associate Principal, Arup, New York  
Worcester Polytechnic Institute,  
BS Mechanical Engineering,  
MS Fire Protection Engineering



Jacoby started early in the fire protection business. As a 17-year-old college student, he helped renovate and reopen the closed fire station in Auburn, Mass. Jacoby jokes he showed up for his junior year assured that he'd have a place to live, only to find out that his new home didn't have electricity or running water. "It made it really easy to come home from class and work on our renovation," he said. As Arup Fire team leader for the New York office, Jacoby's job is to protect the Big Apple by addressing fire and life safety issues. Jacoby is working on the design for the \$1.4 billion Fulton Street Transit Center project, where he is trying to enhance the safety of six 100-year-old subway stations and integrate the new transit center with a historic office building. Jacoby also served as the lead reviewer for U.S. code regulations for the Abu Dhabi International Airport, which used phased smoke control and occupant relocation to keep the airport operating during smaller fire and life safety issues. He was also the lead fire engineer project manager for the Rensselaer Polytechnic Institute's wooden violin-shaped Experimental Median and Performing Arts Center (EMPAC) in Troy, N.Y. Jacoby's love affair with New York also affected his personal life, as he met his wife Debra on New Year's Eve in Times Square. They were scheduled to be married on Sept. 16, 2001, but the FBI took over their original location after the terrorist attacks. They quickly replanned their wedding, for the original date, at Long Island's Milleridge Inn, thanks to another cancellation. They now have two kids, Lucas, 5, and Matthew, 3.



**Elise Kirchofer, PE, LEED AP, 33**

Vice President, Henderson Engineers, Lenexa, Kansas  
University of Wyoming, BS Architectural Engineering



In college, Kirchofer thought she wanted to be a doctor. “But there’s so much memorization,” said Kirchofer, who grew up in Jackson Hole, Wyo. “Then my mom encouraged me to try engineering. And it’s a much better fit.” These days she’s busy working as the lead mechanical engineer on the \$122 million, 265,000-sq-ft seven-story patient tower expansion at Shawnee Mission Medical Center, which includes a new emergency department, surgery suites, ICU and cardiac care unit, 1,820-ton chiller plant, 3,750-kW generator plant, 1,900-brake-hp boiler plant, and a new bulk oxygen plant. She’s also the youngest owner in her firm. At DeSoto School District, she’s working on three building projects including a new 80,000-sq-ft elementary school, and two high school additions. Kirchofer oversaw the building of a \$47 million, 144,000-sq-ft medical clinic at Fort Bliss in El Paso, Texas. Even though Kirchofer wanted to stay in Wyoming, she also wanted to be closer to her 93-year-old grandfather, so she moved to Kansas. Kirchofer jokes when she first met her husband Eric, she brought him to “Grandpa’s house for drinks,” a tradition he keeps with a 5 p.m. Friday martini each week in his neighborhood. Now the couple shares a weekly Sunday night dinner with Kirchofer’s grandfather. Additionally, Kirchofer, a former ski racer, enjoys running, yoga, biking, and hiking with her husband. She also takes time to tutor a sixth-grade Knowledge Is Power Program student every Thursday night in math and reading.

**Sarah Kuchera, PE, LEED AP, 35**

Associate Principal, ccrd partners, Dallas  
Kansas State, BS Architectural Engineering



When Kuchera isn’t streamlining design processes, you can find her mixing a digital turntable—thanks to her husband’s gift—with classic dance tunes from the Beastie Boys to David Bowie in her home. As a “foodie” who hates to cook, she’s always searching for new restaurants for good wine-food pairings. Kuchera also holds the title of the first female stockholder in ccrd’s history and serves as an Architecture, Construction, and Engineering Mentor board member for the Dallas-Fort Worth Chapter. At the suggestion of her grandfather, an electrical engineer, she went into the industry. With an emphasis on healthcare, Kuchera served as the project manager in the fast-tracked 375,000-sq-ft greenfield construction of Texoma Medical Center in Denison, Texas. Using the Toyota Way, her team was able to help shorten the construction schedule by three months and several million dollars. As the project manager, she is overseeing the 750,000-sq-ft expansion of LEED certified Children’s Health Systems in Birmingham, Ala., as well as a central utility plant located three blocks away. The new inpatient specialty hospital is using Revit to create 3-D modeling coupled with a unique design to connect the building to the plant. Kuchera’s other accomplishments include working as the electrical designer on Washington, D.C.’s George Washington University Hospital’s original construction in 2000 and ongoing renovations, and now as the project manager. You can also find Kuchera on softball teams, where she is known for her second-base skills. She also enjoys skiing, tennis, and century (100-mile) rides, including the Dallas MS 150 bicycle ride.

**Ralph Koeber, PE, LEED AP, 40**

Associate Electrical Engineer,  
Spectrum Engineers, Salt Lake City  
University of Utah, BS Electrical Engineering



For more than a decade, Koeber worked as an electrician. “I kept seeing drawings from engineers that I didn’t think were correct,” he said. A co-worker encouraged Koeber to go to college. After much debate, he faced his fear.

At the age of 35, Koeber became an engineer. “Now I realize that it is harder than it looks,” he said. As the lead electrical engineer, Koeber designed a “Superlab” remodel for Novell, a software testing facility that has several thousand desktop computers running programs at once. His challenge was to negate the computer harmonics with filters to prevent distribution problems that can overload the system. As the project engineer, Koeber designed the electrical system and oversaw installation of a 70,000-sq-ft energy exploration and technology building and a 50,000-sq-ft welding and diesel mechanics shop at the Uintah Basin Applied Technology College about 200 miles east of Salt Lake City. For the 40 welding stations in the shop building, Koeber was able to calculate the amount of power used and decrease project costs by identifying how much load the transformers would actually see. An Eagle Scout, Koeber heads of a troop of Boy Scouts who do everything from making snowshoes out of electrical conduit to Dutch-oven cooking. An avid fly fisherman, he even took to the streets of Salt Lake City when they flooded in the 1980s and fished trout out of the potholes. After working as a Mormon missionary in Australia, Koeber now likes the distinct taste of brown axel grease with 50 lbs of salt, also known as Vegemite. His wife Valerie dislikes it, but his children, Melissa, 13, and Ben, 10, enjoy it.

**Ken Kutsmeda, PE, LEED AP, 39**

Engineering Design Principal,  
Assistant Chief Electrical Engineer,  
KlingStubbins, Philadelphia  
Drexel University, BS Electrical Engineering



Kutsmeda jokes that if there is a sport, he’ll play it. “It doesn’t matter if it’s ultimate Frisbee, lacrosse, or curling,” he said, but usually he plays shortstop and bats an average of .620 on his softball team. He also loves whitewater rafting Class IV and V rapids on the Gauley River in West Virginia and creating an Alfred Hitchcock haunted house on Halloween that includes dog cages with “human” legs hanging out and glowing LED “dog eyes” as well as American Girl dolls with knives standing over body bags. When he’s not scaring his neighborhood kids and parents, he’s busy designing electrical power and lighting distribution systems for mission critical facilities. As the lead engineer, he converted an old Wachovia check processing facility into a 139,000-sq-ft data center for Merck & Co. in Charlotte, N.C. Kutsmeda worked from concept through commissioning on the fast-track project, which required the first phase to be live within four months. In the middle of the worldwide migration, the site experienced a power outage after a snake crawled across a high-voltage utility switch and the backup generator failed. Luckily, Kutsmeda had planned ahead and built a fully redundant electrical system that transferred the load and kept everything up and running. Kutsmeda also worked on 911 call centers in Brooklyn, where he oversaw the commissioning of a 60,000-sq-ft emergency center, which included testing during peak hours on weekends. Kutsmeda and his wife Jeanine have a nearly 2-year-old son, Ben.

## Vidar Landa, PE, 35

Senior Consultant, Schirmer Engineering, Torrance, Calif.

Stord/Haugesund College (Norway), BS Fire Protection Engineering; Worcester Polytechnic Institute, MS Fire Protection

This Norwegian loves soccer, surfing, fishing, barbecuing, camping, and almost everything about the outdoors, except for spiders. "I'm scared to death of them," he said. "I run for my life and my wife Kimberly has to come and kill them." Landa, who grew up in Norway, decided to become a fire protection engineer because he loved setting things on fire as a child. He served as a fireman in his hometown of Haugesund for four months and eventually emigrated to the United States. As a fire protection engineer and Schirmer Engineering's project manager, Landa has provided building code, automatic sprinkler, fire alarm, and smoke control consulting services for the \$2.5 billion L.A. Live mixed-use development that covers more than six city blocks in downtown Los Angeles. Since he began working on the project in 2004, Landa has helped develop innovative and performance-based fire protection solutions tailored for the project's unique architectural design features. At the 7,100-seat Nokia Theatre, Landa helped create an innovative smoke control system that draws the smoke away from the seating area toward the performance platform, which created smaller stairwells while boosting safety and increasing the number of seats. To improve the safety of the tower staircases shared by the 54-story Ritz Carlton and JW Marriott hotel, Landa split the staircases into two separate units that would pressurize individually to keep the stairs free of smoke and allow for safer evacuation in case of a fire.

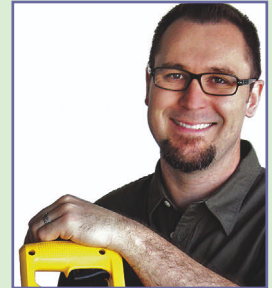


## Brandon Lemonier, PE, LEED AP, 35

Project Manager, X-nth, Maitland, Fla.

Milwaukee School of Engineering, BS Architectural Engineering

Lemonier's primary job is to make sure theme park guests have fun without knowing the thought process behind the amusements. In the past two years, his project management in electrical engineering and lighting design in the entertainment industry have generated \$4.3 million in revenue. As an MEP project manager, he supervised the design of countless support systems for many of the entertainment world's top attractions, including special effects like those at "Curse of the DarkKastle" in Busch Gardens, Williamsburg, Va., where water droplets hitting your face feel like glass shattering, a heated fan creates the sensation of the ghostly count's hot breath, and faux fog simulates a roaring fire. In Orlando, for SeaWorld's Aquatica waterpark, Lemonier designed more than 60 acres of decorative lighting using energy-efficient sources such as metal halide and fluorescent instead of traditional incandescent sources in an effort to stay true to SeaWorld's commitment to conservation. Lemonier serves on his alma mater's Industrial Advisory Committee, for the architectural engineering program, helping to guide the program's future. He worked his way through college as an assistant chef, line cook, and kitchen manger at restaurants like Brett Favre's Steakhouse, Milwaukee Ale House, and eateries at Six Flags Great America in Gurnee, Ill. He still likes cooking but has taken on home brewing and woodworking. Lemonier and his wife Theresa are expecting their first child in September.



## Dunstan Laurence Macauley III, PE, LEED AP, 39

Director of Mechanical Engineering, Encon Group, Kensington, Md.

University of Maryland, BS Mechanical Engineering

Macauley has one of the most honorable jobs as an engineer: designing an environmentally sealed chamber to protect the American flag—the Star-Spangled Banner exhibit in the Smithsonian National Museum of American History. Macauley came up with a cost-effective system design that would maintain a 65 F temperature with 45% relative humidity within a 50- by 50-ft concrete box. Macauley also worked on the HVAC systems for a pharmaceutical manufacturing facility in Walkersville, Md. The facility needed two identical 2,500-sq-ft fill stations within a cleanroom to produce and grow cell culture media in a controlled environment. Outside of work, Macauley has an eye for landscape photography, especially lighthouses and historic places of worship. "I have no problem driving two, three hours just to capture the right scene and turn around and drive back," he said. The former college resident assistant (RA) met his wife in middle school, and still enjoys playing basketball even though he can't jump as high as he used to as a 6-ft 3-in. power forward. Macauley frequently volunteers with the "pay it forward" attitude, via outreach programs at the local YMCA and by supporting several orphans in West Africa's Liberia. He also served as the chair of ASHRAE's Region III regional conference last year, serves as the vice president for the national chapter, and will start his term as chapter president in July 2011.



## Robert McKay, 34

Engineering Manager, CLEAResult Consulting, Austin, Texas

University of Texas, BS Mechanical Engineering

McKay is the king of adventure. Unsure of what he wanted next, he left his engineering job in Portland, Ore., and decided to travel to Central and South America, living in the Amazon jungle for three months at camp Jatun Sacha in Ecuador. McKay's quick thinking helped the rain forest camp build a 33-ft footbridge across a river out of bamboo, chicken wire, and cement. "It was amazing and the people amazed me," McKay said, adding that a thorn from a vine went through his boot and cut his foot, so the indigenous people grabbed moss off a tree to use as a natural antiseptic. He also spent time in Costa Rica, helping turtle hatcheries, and ultimately met his wife Katherine while traveling in Buenos Aires, Argentina. These days, he gets his excitement by hiking "14'ers," 14,000-ft tall mountains, and rebuilding a cabin on an old ranch in West Texas. For CLEAResult, McKay oversees the team that provides company-wide engineering support while quantifying the savings of more than 70 utility energy-efficiency programs nationwide. McKay created a 20-person intern program to develop potential new employees while giving his staff "some breathing room" so they'd have additional time to focus on other projects. McKay also developed project tracking systems, an all-staff technical training program, an online Q&A forum, standardized methods for program teams to submit engineering requests, and other workflow efficiencies. The combined effort helped increase total project reviews by 400% in a single year.



**Jessica Navarro, PE, LEED AP, 34**

Senior Associate, ccrd partners, Dallas  
Kansas State, BS Architectural Engineering,  
MS Architectural Engineering



Through the view of a lens or an engineer, Navarro has the vision to see more than meets the eye. Navarro loves to travel with her husband Juan and with her 35-mm Pentax K1000 camera, which she still has from her high school days. Ironically, it was one of the few things she still had after the airline lost their luggage during their honeymoon in Spain last year. An avid photographer, Navarro has taken a picture every day since January of this year and plans on documenting 365 days of photographs with her other passion, scrapbooking. At ccrd, Navarro oversees the project management and design of mechanical, electrical, and plumbing systems for large healthcare facilities. For the past year, Navarro has served as the project manager on four hospital campus projects in California totalling more than 1 million sq ft: Riverside Community Hospital, Los Robles Hospital and Medical Center, Regional Medical Center of San Jose, and Good Samaritan Hospital. She worked as an electrical engineer on the emergency department and ICU for the 120,000-sq-ft expansion of Rapides Regional Medical Center. Navarro serves on several ccrd committees including the Advisory Committee to the Board of Directors, Quality Assurance/Quality Control, and Electrical Master Specification writers. When she's not working she loves scrapbooking, and now has a collection of more than 35 detailing her life and travels. Navarro met her husband, an architect, while she was working as an electrical engineer at Clear Lake Heart Hospital in Webster, Texas.

**Julie Paquette, PE, LEED AP, 33**

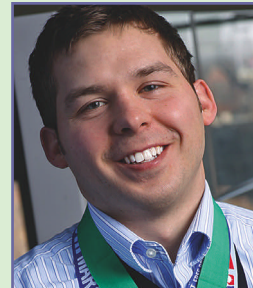
Associate, Vanderweil, Philadelphia  
Brown University, BS Chemical Engineering;  
Massachusetts Institute of Technology,  
MS Technology and Policy, Civil Engineering



Just call her the dream maker. Paquette has helped with nearly 40 LEED certified projects, including the LEED Silver Palazzo Hotel at Las Vegas' Venetian Resort. The 7.5-million-sq-ft building was already under construction when the hotel decided to "go green." After an extensive analysis, Paquette helped redesign the building's mechanical, electrical, and plumbing systems for a 65% reduction in lighting power density inside. By replacing plumbing fixtures, she reduced the water use by 35%. "I'm the person who gets to play the dreamer," she said. "By translating green goals into project documents, I help make abstract ideas a reality." Paquette worked as the sustainable design engineer on the largest LEED Platinum project on record, the 6.5-million-sq-ft international graduate-level research university, King Abdullah University of Science and Technology (KAUST) in Saudi Arabia. The 17-building campus includes aggressive renewable energy systems including nearly 1 acre of solar thermal panels and 4 acres of photovoltaics. When she's not leading Vanderweil's Green Integration Group, Paquette is feverishly working with her father on restoring the vintage aluminum 1962 Flying Cloud Airstream that she bought from craigslist. "It's a cult hobby," she said. Inside, she's using salvaged wood for a mid-century Danish interior. As soon as it's done, she plans on "hitting the road" with her husband Derek, a surgeon she met while having her wisdom teeth extracted, and their 21-month-old daughter Brooke. She jokes her life isn't too eccentric for a "city-lover" like herself who grew up with an old-fashioned phone booth in her parents' living room.

**Michael Nowicki, PE, LEED AP, 30**

Electrical Engineer, Kahn, Detroit  
Wayne State University,  
BS Electrical Engineering,  
MS Alternative Energy Technology



Like most engineers, "Mike" Nowicki is obsessed with numbers—only his fixation is with loose change. "I'm always collecting, everywhere I go," he said. The \$1,270 he's collected in a water cooler jug is going into his baby's college fund. He's also obsessed with getting involved. He's a member of IEEE, the Engineering Society of Detroit, the Great Lakes Renewable Energy Assn., Toastmasters, and several committees at Kahn. Through these clubs and committees, he has developed skills he used on projects like the National Alabama Corp.'s 2-million-sq-ft Railcar Manufacturing Facility that sits on a 640-acre site. As a design engineer, he created and coordinated the electrical 3-D model for North America's largest industrial manufacturing facility to be LEED certified. A 5-ft-high band of glass at the top of the plant allows more natural light to reduce the use of artificial lighting by 50%. The long, narrow building includes nearly 1 mile of train tracks for the fabrication of rail cars in assembly-line fashion. Nowicki also helped to incorporate the Planetree Visionary Design method, which involves a patient-centered, holistic approach to healthcare, at the LEED Silver rated Henry Ford Hospital in West Bloomfield, Mich. To combine his love of sports and volunteering, Nowicki has done the 300-mile Make-a-Wish Foundation bicycle tour and competed in the Great Floridian Ironman Triathlon—a 2.4-mile swim, 112-mile bicycle ride, and 26.2-mile marathon. Nowicki and his wife Lauren love their Border Collie dog Fritz, and calico cat Felix. They are expecting their first son in May.

**Jason Perry, PE, 30**

Associate Department Manager,  
Matrix, Maumee, Ohio  
Case Western Reserve,  
BS Electrical Engineering

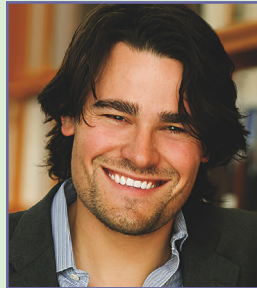


Most high school students just worry about prom and getting into college. After Perry's father, an electrician, died during his senior year of high school from an accidental electrocution, he became a role model for three younger brothers; the youngest was nine at the time. Instead of going away to college, Perry stayed in his hometown of Tiffin, Ohio, to attend Heidelberg University before transferring to Case Western. "It blows my mom's mind that I went into the field," Perry said. "But I didn't link the two that way—that electricity is bad. Accidents happen sometimes for no reason." His ability to care for others means he pitches in at work, and goes above and beyond what is asked just to get the job done. For AK Steel, Perry led a complex \$7.2-million full upgrade on an old control system for a basic oxygen furnace, which was slowly migrated to the new system during one-day downtimes the plant had every six weeks to ensure the plant continued to run. Perry also helped design, manage, and implement the controls and instrumentation of a \$2.1-million greenfield canola crushing plant in Saskatchewan, Canada. Perry volunteers with Habit for Humanity, helped campaign for Seneca County Prosecutor Derek Devine, and serves as a lector at his church. He is fan of fantasy novels and enjoys relaxing and swimming in Lake Erie with his family: wife Erin, and daughters Avery, 4, and Rylan, 2.

## John Paul Peterson, PE, LEED AP, 29

Associate, Stantec Consulting, San Francisco

Messiah College, BS Mechanical Engineering



If spontaneity is the spice of life, then Peterson is trying every choice imaginable. Peterson graduated from high school early to live in Honduras, working as a hospital English-to-Spanish translator. Originally, he dreamed of working as a physical therapist for people who needed prosthetics. So he decided to become an engineer to help understand the inner workings of prosthetics. "School was always very hard for me," said Peterson. After taking a hard look at the amount of time required for medical school, he opted to refocus on life as an engineer. His new focus: renewable energy and sustainability with an emphasis on water conservation. He is the project manager for the Research Support Facilities, a 220,000-sq-ft net-zero National Renewable Energy Lab in Golden, Colo., that aims to be LEED Platinum. The building's narrow depth—no wider than 60 ft—and east-west orientation are ideal for natural ventilation and solar control. It is 95% daylight, includes photovoltaic panels, and uses an open office layout. An underground concrete labyrinth pre-heats or pre-cools outside air before distribution through the raised floor chamber. Peterson is involved with the North California chapter of USGBC, GreenBuild, the Society of College and University Planners, and AIA's What Makes It Green, and has worked pro bono on the design for the Qian Yang School in China. He enjoys surfing, cycling, Telemark skiing, and competing in triathlons, including an Ironman.

## Andy H. Smith, PE, LEED AP, 39

Principal, Jordan & Skala Engineers Inc., Dallas

University of Alabama, BS Mechanical Engineering



When it comes to engineering, Smith knows how to work a little magic. He's turned a Burger King into a bank and a church into a jail, where the chapel became the holding cell. He's also renovated an office building into a biohazard level II laboratory. The roof wasn't originally designed to handle any weight; it required custom-built 20-ft-high, 10-ft-wide vertical air handling units with ladders to access equipment including the humidifying and chilled water sections. Smith designed the 2,000-unit Erickson Retirement Community in Dallas and in Houston. He had to prove to the owners' engineer that a fan-forced cooling tower would be better suited than an ejector-style spray tower. After many discussions, Smith had a cooling tower brought in on a flatbed truck to finally convince the owners that the newer system was quieter and more effective. Smith has opened offices in Charlotte, N.C., and more recently in Dallas, where he oversees the three offices for the western United States. Smith started his career after college, working for a heating and air conditioning company, Shumate Mechanical Inc., cleaning trucks and organizing tool boxes, then as an installer eventually working his way into a sales position. For fun, Smith enjoys painting abstract acrylics, drawing ink sketches, and volunteering with Habitat for Humanity. He went skydiving in Georgia, back in his "hippie hair days" and met his wife Susan while training for the 10K Peachtree Road race in Atlanta. Smith enjoys running, and playing basketball with his son Andrew, 6, and daughter Mary Ansley, "M.A.," 3.

## Justin Schmeer, PE, 30

Project Manager, Life Safety, Venetian Casino Resort, Las Vegas

Worcester Polytechnic Institute, BS Chemical Engineering, MS Fire Protection Engineering



Schmeer is one-of-a-kind, which isn't that easy for an engineer in Vegas. He holds the esteemed title as the only licensed fire protection engineer who works directly for a hotel property in Las Vegas. At first, Schmeer served as a third-party smoke control inspector. Now he oversees all of the life safety aspects within the enormous number of buildings in the Venetian Casino Resort, including the Palazzo Hotel and Theatre (where Jersey Boys is currently running), the Sands Expo and Convention Center, and Sands Casino Resort in Bethlehem, Pa. He is overseeing active construction projects in Clark County, Nev., to ensure they are being built correctly, code compliant, and inspected properly. Since Schmeer's former boss, David Wessel, created the position eight years ago, not a single property has opened late. Schmeer also oversaw fire protection and life safety implementation of the 7.5-million-sq-ft, 55-story tower Marina Bay Sands in Singapore. When he's not working, Schmeer admits he's a prankster who has taken chairs apart and hid life-size paper cutouts around the office. He loves scuba diving in Aruba, Australia, Fiji, and various parts of Asia. A big movie buff who can do a keen Michael Corleone Godfather impression, Schmeer jokes he was a bit of a pyromaniac while growing up, frequently burning his G.I. Joes and occasionally lighting the backyard on fire.

## Brian Stacy, IALD, LEED AP, 36

Associate Principal, Arup, New York

DePaul University, BFA Lighting Design



Just like lighting design, Stacy jokes that the art of French cooking is a complex and process-oriented skill. His only caveat: The food must taste as good as it looks. Much to the delight of his wife Beverly, who purchased private cooking lessons for him, Stacy enjoys sautéing scallops or encrusting a sea bass with a salt mixture. When Stacy isn't trying to imitate New York French chef Daniel Boulud, he's overseeing Arup's New York- and San Francisco-based lighting groups. "It's about the story of light," he said. "It can transform a 3-D space into so many things by sculpting it with light." It's something Stacy knows well, having grown up in a very rural part of upstate New York, where if you needed something other than a quart of milk, you had to drive to Canada. Stacy began building light fixtures in his parents' garage for high school dances, and went on to be a resident lighting designer for the The Field Museum in Chicago. As the project lighting director, Perry oversaw the amazing light spectacle of Abu Dhabi's \$489-million five-star Yas Marina Hotel, which includes a Grand Prix Race track that runs underneath the hotel. The glass and steel façade includes 5,000 custom-made LED lights that look like a snakeskin-patterned canopy that curves in a stingray-esque manner above the nine-story hotel. It constantly changes colors cued by an algorithm so the same scenes are never seen from the original seven images, except when specified. The exterior is optimized to be transparent in the day, to decrease the loads of cooling by using solar power.

**Christine Theisen, PE, 29**

Consultant and Team Leader,  
Rolf Jensen & Assocs. Inc., Las Vegas  
Arizona State University,  
BS Mechanical Engineering



Just looking at 5-ft 2-in. “Christy” Theisen, you might not guess that she can dead-lift 225 lbs. There’s a reason they call her “Mighty Mouse.” After severe shin splints from cross-country, Theisen stopped running and began swimming and bicycling instead. But she wanted a different challenge, so she took up powerlifting and competing in Las Vegas’ Corporate Challenge, which honors the Olympic spirit with 34 events from darts to flag football over a three-month period. She served as fire protection engineer and project manager for the Golden Nugget Tower and for the recently opened Viva ELVIS Cirque du Soleil show at the Aria Resort and Casino within the CityCenter mega-resort in Las Vegas. Theisen developed a life safety system that handles the pyrotechnics and other special effects of the show, including a 20-ft-tall Elvis that shoots flames out of his hands, while ensuring that the sprinkler systems over the 1,850-seat auditorium and stage do not falsely activate. As the project manager, Theisen is now working on a 2-million-sq-ft 14-gate terminal at Las Vegas’ McCarran International Airport. In her off time, Theisen also enjoys going ATVing with her husband Dan on sand dunes near Death Valley and hanging out with her two dogs, a boxer, Leila, and a black Labrador named Lucky.

**Mike Tillou, PE, LEED AP, 37**

Associate Vice President,  
Cannon Design, Grand Island, N.Y.  
Rensselaer Polytechnic Institute,  
BS Mechanical Engineering



It’s about the thrill of an adventure for Tillou. The adrenaline junkie spent eight years in Salt Lake City, hitting the slopes as a Telemark skier. He’d wake up at 1:30 a.m. to hike and then ski down Skillet Glacier on Grand Teton’s Mount Moran. “As the sun comes up, it cooks all the snow, so you hike five and a half hours up the 5,000-ft mountain to the summit just to ski it.” These days, Tillou enjoys skate skiing, a much faster, more grueling “freewheeling” form of cross-country skiing. Tillou started his own sustainability and energy consulting firm, Tillou Engineering, and after two years came to Cannon to lead its firm-wide Energy Services Group in 2009. Tillou led the sustainability effort of the LEED Gold certified 90,000-sq-ft North and South Academic Building Project at Williams College, which replaced older buildings from as early as the 1920s, and saves more than \$40,000 in annual energy costs. The design used daylighting so 98% of the long, narrow building has views to the outside and also incorporated individual HVAC controls because the occupancy rate hovers at 30% to 40%, allowing the building to be heated or cooled only for the fraction of people who are inside. Tillou also worked on Adelphi University’s Centers for Sport and Performing Arts, a \$72-million expansion and renovation project that is seeking LEED Silver certification. Tillou serves on the Williamstown, Mass., “COOL Committee,” which is helping the town reduce its carbon emissions by 10% below 2000 levels. He also enjoys rock climbing, and spending time with his wife Lara and sons Adam, 5, and Cameron, 2, who he is teaching how to ski.

**Andy Thompson, PE, LEED AP, 39**

Associate, Arup, San Francisco  
University of Colorado-Boulder, Civil Engineering;  
University of California-Berkeley,  
MS Engineer, Earthquake Engineering



Every time you feel the ground shake or see a natural disaster, think of Thompson, an earthquake engineer. He recently visited Haiti and Chile, trying to help residents after the turmoil. As Arup in the Americas’ leader of the Risk Consulting Practice, Thompson goes to various parts of the world, advising on the potential catastrophic risk of an earthquake, hurricane, tsunami, or terrorist attack from an engineering, insurance, and financial perspective. While Thompson was studying at Berkeley, he became interested in why clients were not willing to spend a little more money up-front to prevent much larger, more extensive, and expensive problems in the long term. “There’s really a sweet spot between facility management and financial management,” Thompson said. “It’s important to understand the insurance and engineering needs at the same time.” Although he is involved in all types of natural disasters, his specialty—living in California—is earthquakes. To do his job right, he’s slept in shelter camps, surrounded by roosters, dogs, and gunfire in places like Port au Prince. To relax, Thompson plays the drums in a band, The Great Sand Waste, which recently released a CD and has a MySpace page. He spent part of his post-college life hitchhiking across Europe, working as a house drummer in Nice, France. Born in England, Thompson has strong affinity for beer like Newcastle.

**Jun Yang, PE, LEED AP, 33**

Principal, CFO, Infrastructure Factor  
Consulting (iFactor), El Segundo, Calif.  
UCLA, BS Mechanical Engineering,  
MBA Business Administration



Yang loves a good challenge. Give him almost any food and he’ll try it, whether it be a cricket or spoonfuls of eye-watering wasabi. He even won an eating contest by polishing off 40 fried éclairs to win \$200 bet. An avid snowboarder, he enjoys hitting the slopes at California’s Mammoth Mountain. He also likes pulling apart Nissans, something he started in college with his Sentra and his friend’s car, and has continued with his most recent purchase, a 1993 Nissan 240SX. In the office, Yang, one of iFactor’s founding partners, specializes in planning, designing, and constructing building systems, focusing on research and new technology, like developing cooling solutions using tools like computational fluid dynamics. “It’s about helping clients implement their dreams, to make their ideas a reality.” Yang has brought that philosophy to fruition with first-of-a-kind projects with advanced technologies like the Liebert XP system and the DataAire split system with wireless controls. He said that pursuing an MBA was his biggest life-changing experience. “Engineering teaches you solutions from equations and calculations,” said Yang, who graduated cum laude as an undergraduate. “I learned that real life solutions involve people. Business school helped me understand the importance of the people effect, which cannot be calculated from an equation.” He also serves as a deacon at Grace and Peace Presbyterian Church, where he plays the violin in the orchestra and electric bass in the band, and supports efforts to feed children in developing countries through fundraising for World Vision.